Changes in The Forest Resource at Ft. Campbell, KY: Goals and Management

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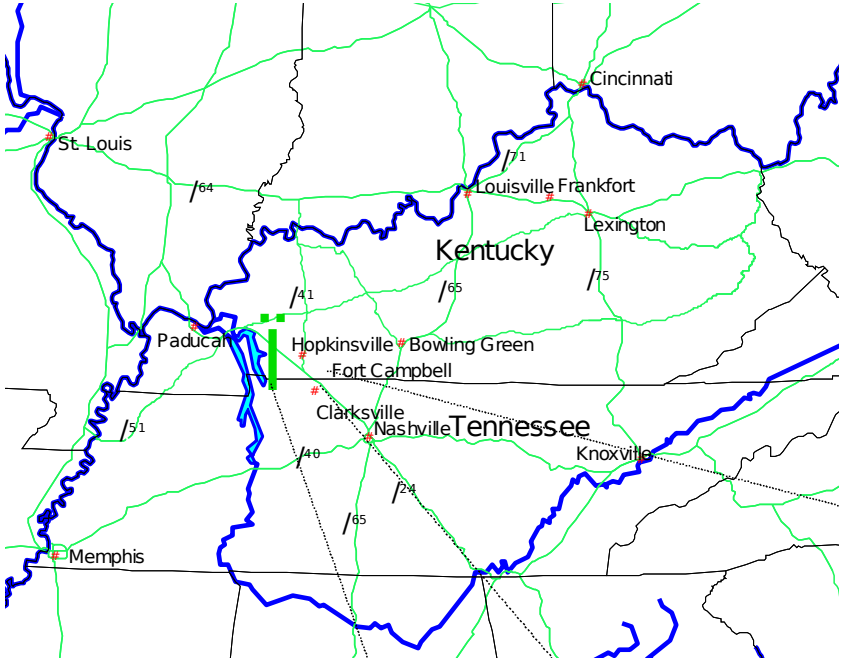
Cincinnati
St. Louis
71
64
Louisville
Frankfort
Lexington
Kentucky
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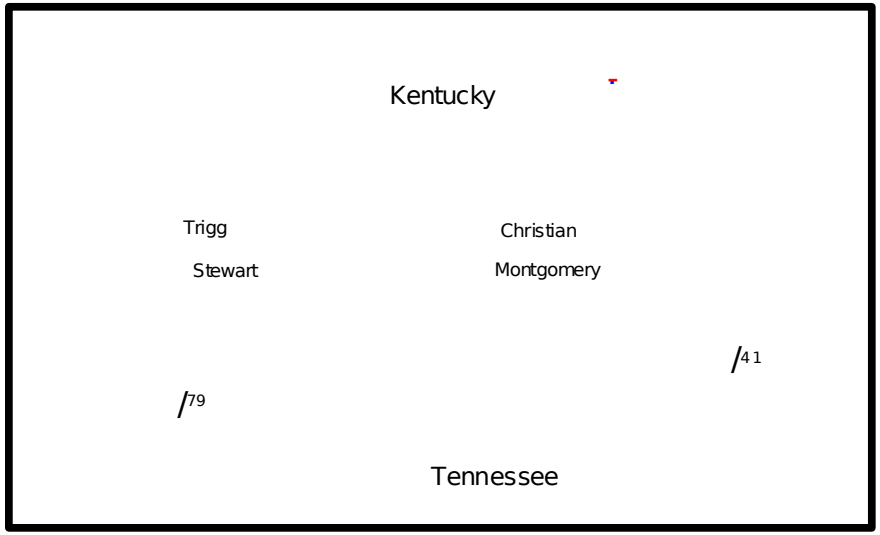
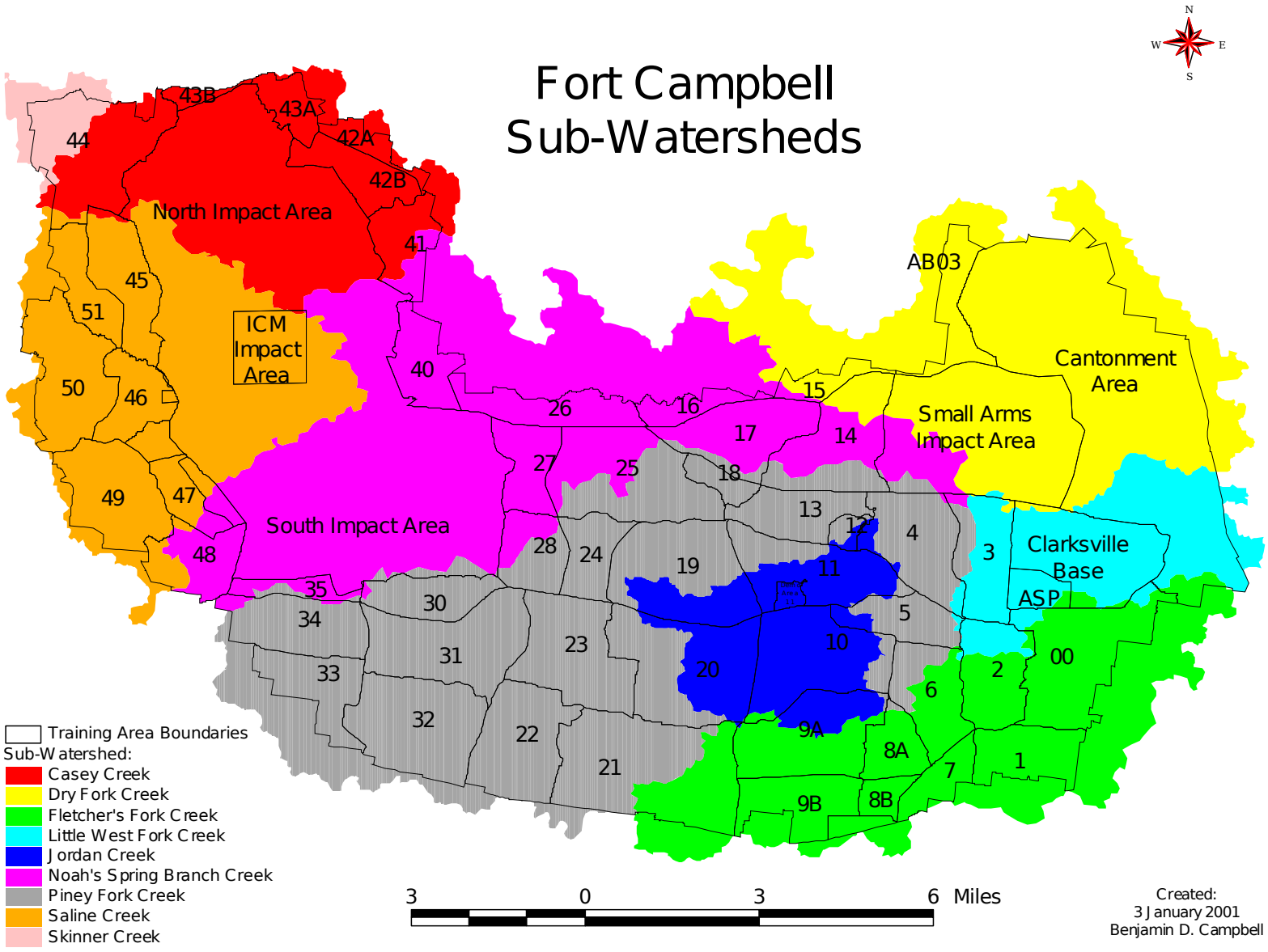
75
41
Paducah
Hopkinsville
Bowling Green
Fort Campbell
Clarksville
Nashville
Tennessee
Knoxville
51
40
24
65
Memphis

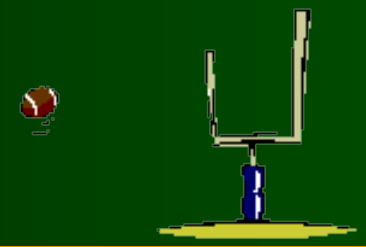

Kentucky
Trigg
Christian
Stewart
Montgomery
41
79
Tennessee

Fort Campbell Sub-Watersheds



Created:
3 January 2001
Benjamin D. Campbell

Goal Hierarchy



- 1. Support Training
  - Increase military maneuverability in pine stands
  - Improve forest access
  - Provide a diversity of forest communities
  - Maintain training environment
    - e.g. tactical concealment areas

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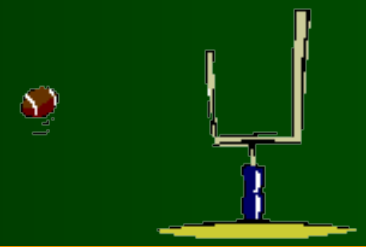
Goal Hierarchy



- 2. Generate Budget and Timber
- 3. Enhance Sustained Yield Management
  - Maintain upland oak sites
  - Maintain bottomland cover types
  - Encourage development of old-growth hardwoods

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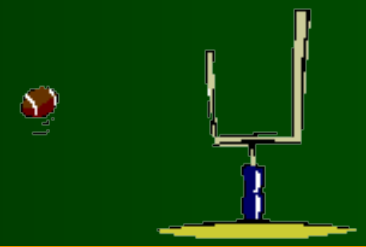
Goal Hierarchy



- 4. Enhance Terrestrial Wildlife

  Populations/Habitats

  - Protect threatened and endangered species
  - Support hunting operations

- 5. Protect Aquatic Ecosystems
  - Eliminate excessive sedimentation
  - Restore, maintain and improve riparian zones

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Indiana & Grey Bats

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Sport Hunting

Goal Hierarchy

- 6. Promote Forest Health
  - Protect against catastrophic fire
  - Protect against diseases & insects
  - Protect against non-native invasive species
  - Restore, maintain, and improve ecological functions and values

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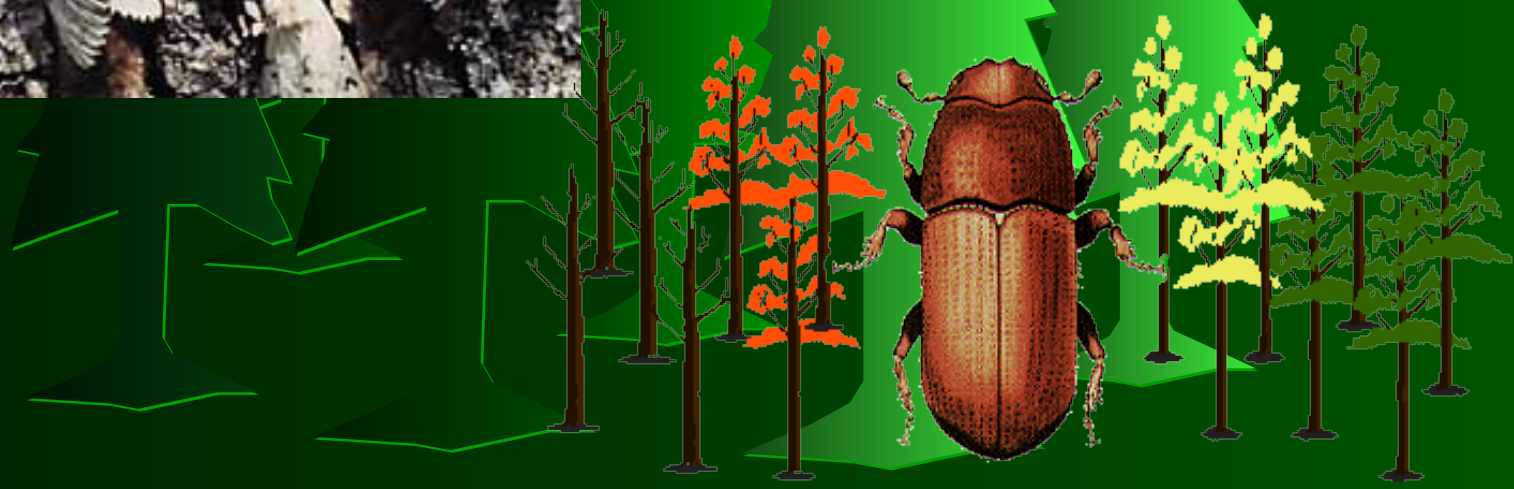
Gypsy Moth and SPB



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Kudzu

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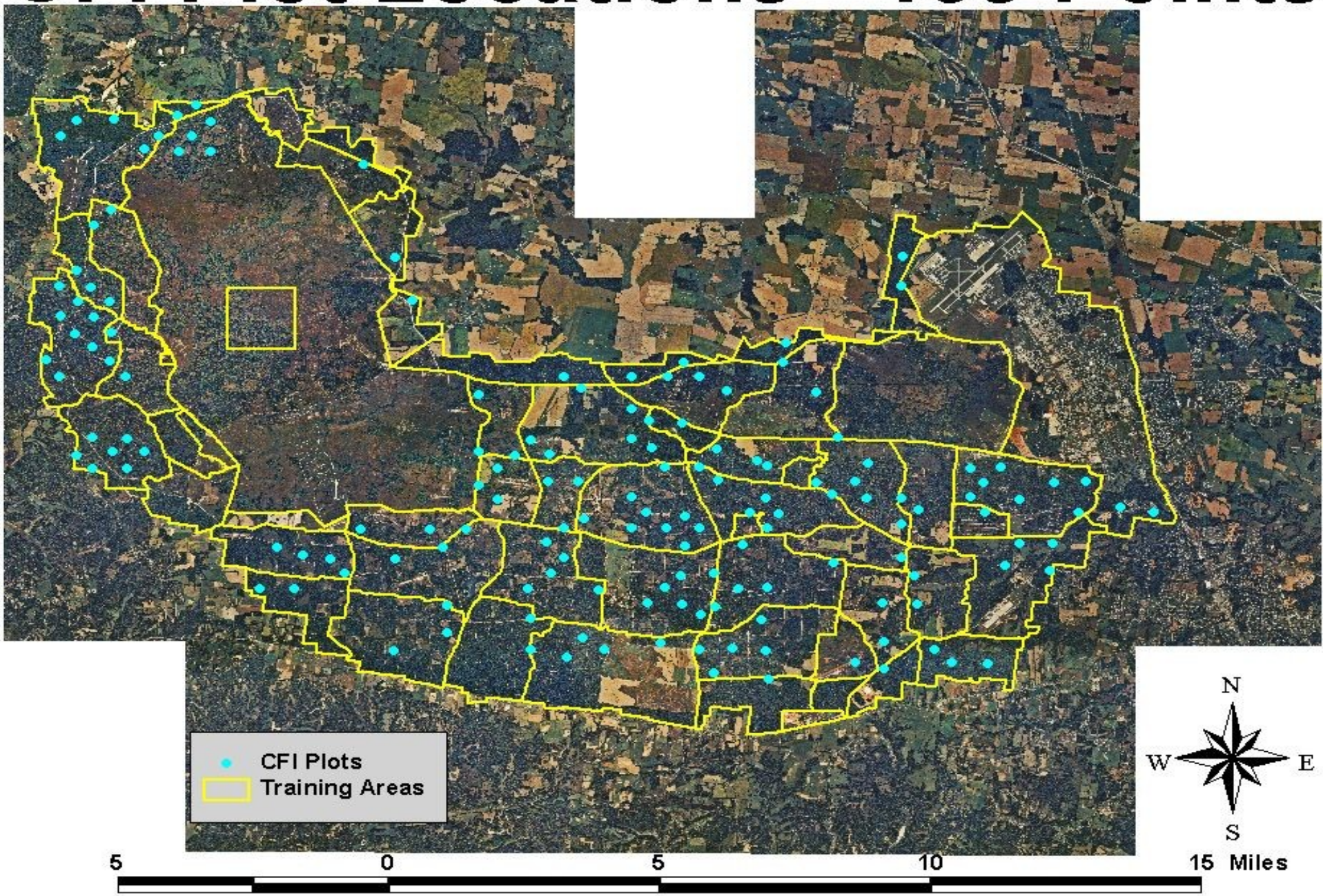
Continuous Forest Inventory

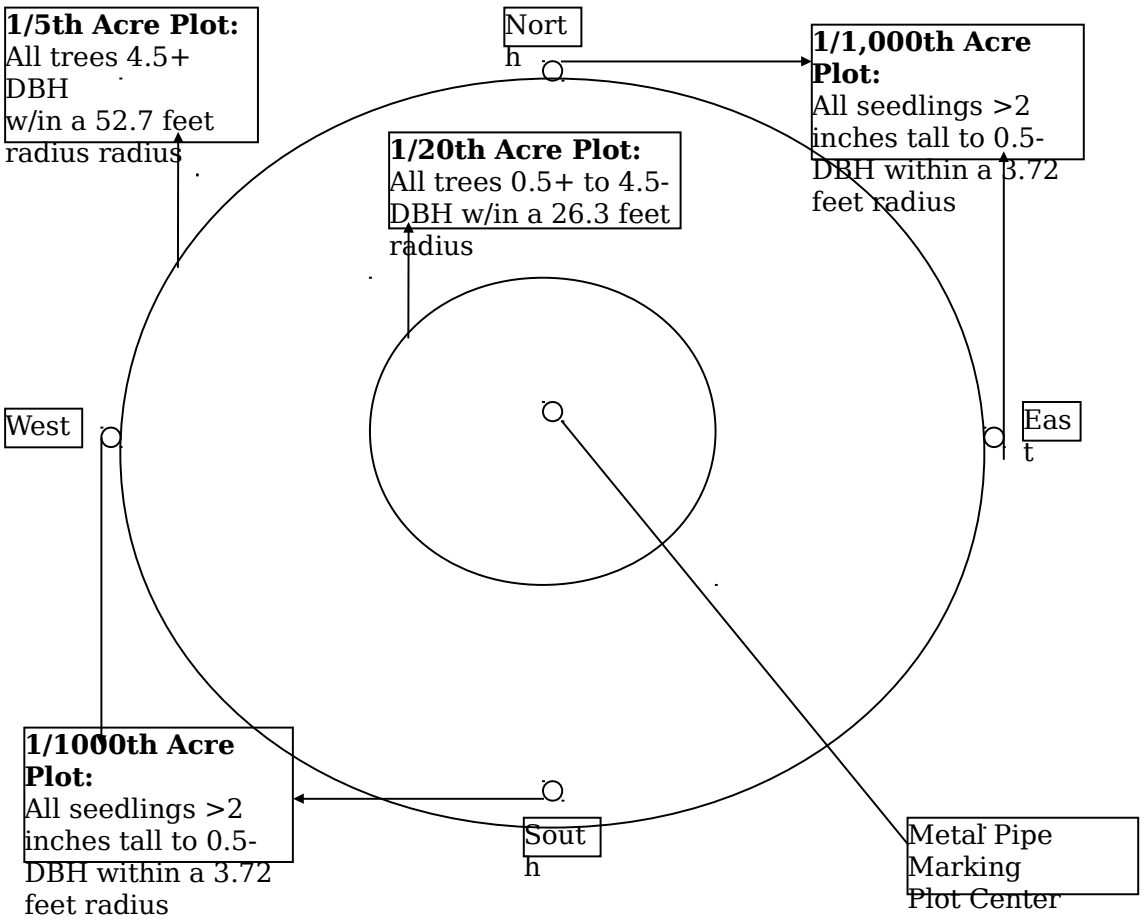
A system of permanent plots used to estimate yield, mortality, growth and regeneration through time.

At Fort Campbell CFI plots have been measured on a 5-year cycle since 1962

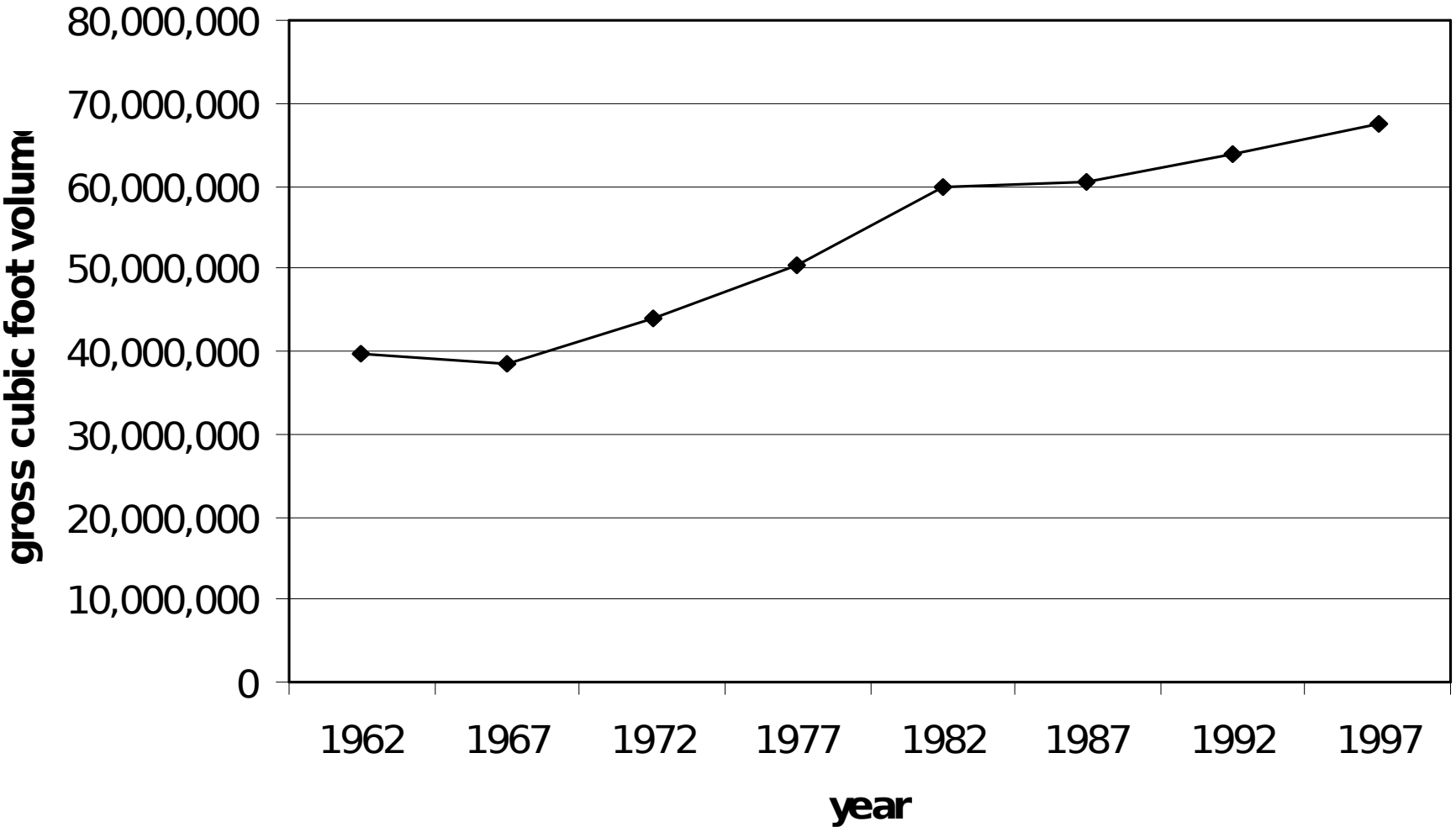
CFI Plot Locations - 158 Points



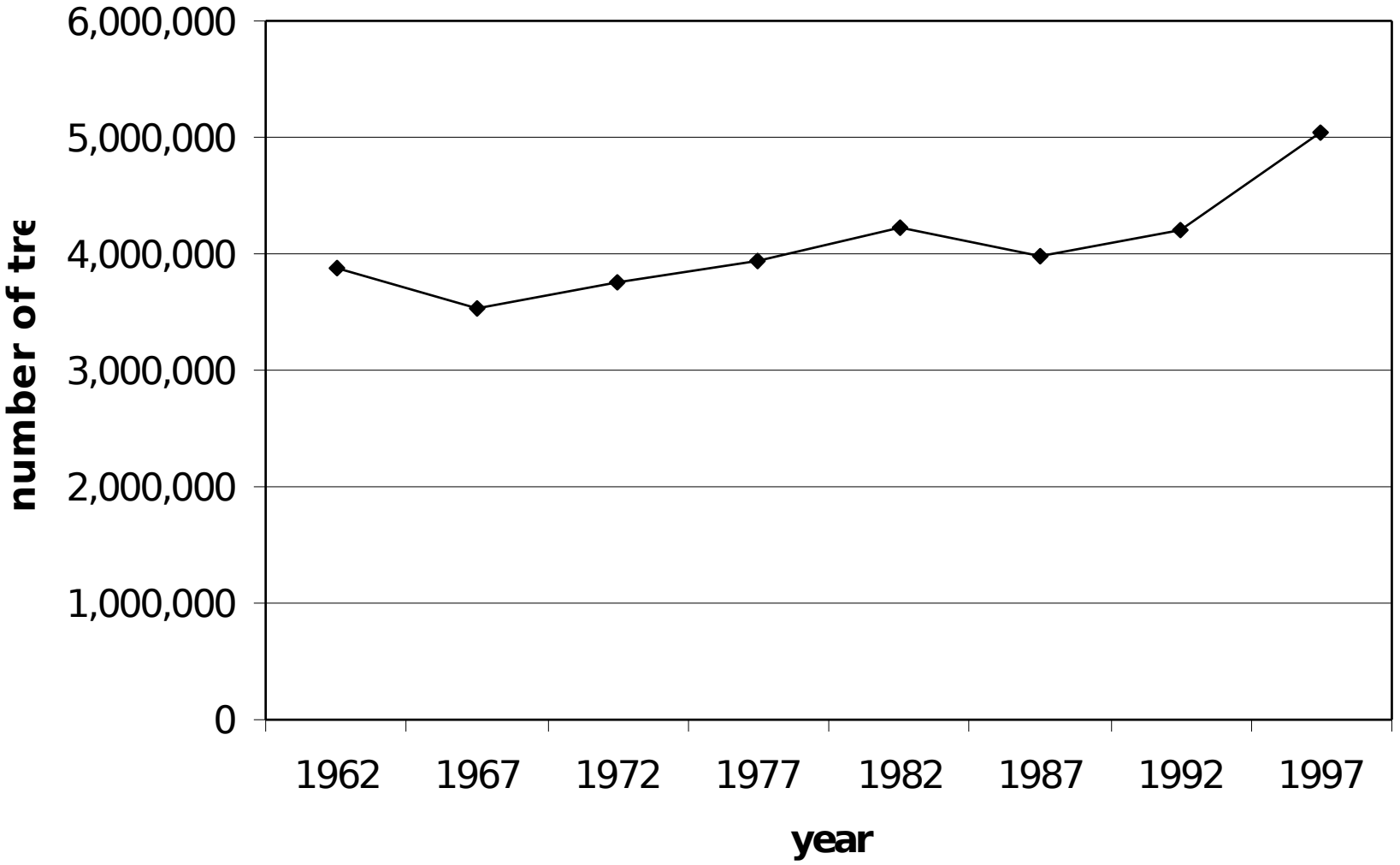
CFI plot layout


1/5th Acre Plot:
All trees 4.5+ DBH
w/in a 52.7 feet radius radius
North
1/1,000th Acre Plot:
All seedlings >2 inches tall to 0.5-DBH within a 3.72 feet radius
1/20th Acre Plot:
All trees 0.5+ to 4.5-DBH w/in a 26.3 feet radius
West
East
1/1000th Acre Plot:
All seedlings >2 inches tall to 0.5-DBH within a 3.72 feet radius
South
Metal Pipe Marking Plot Center

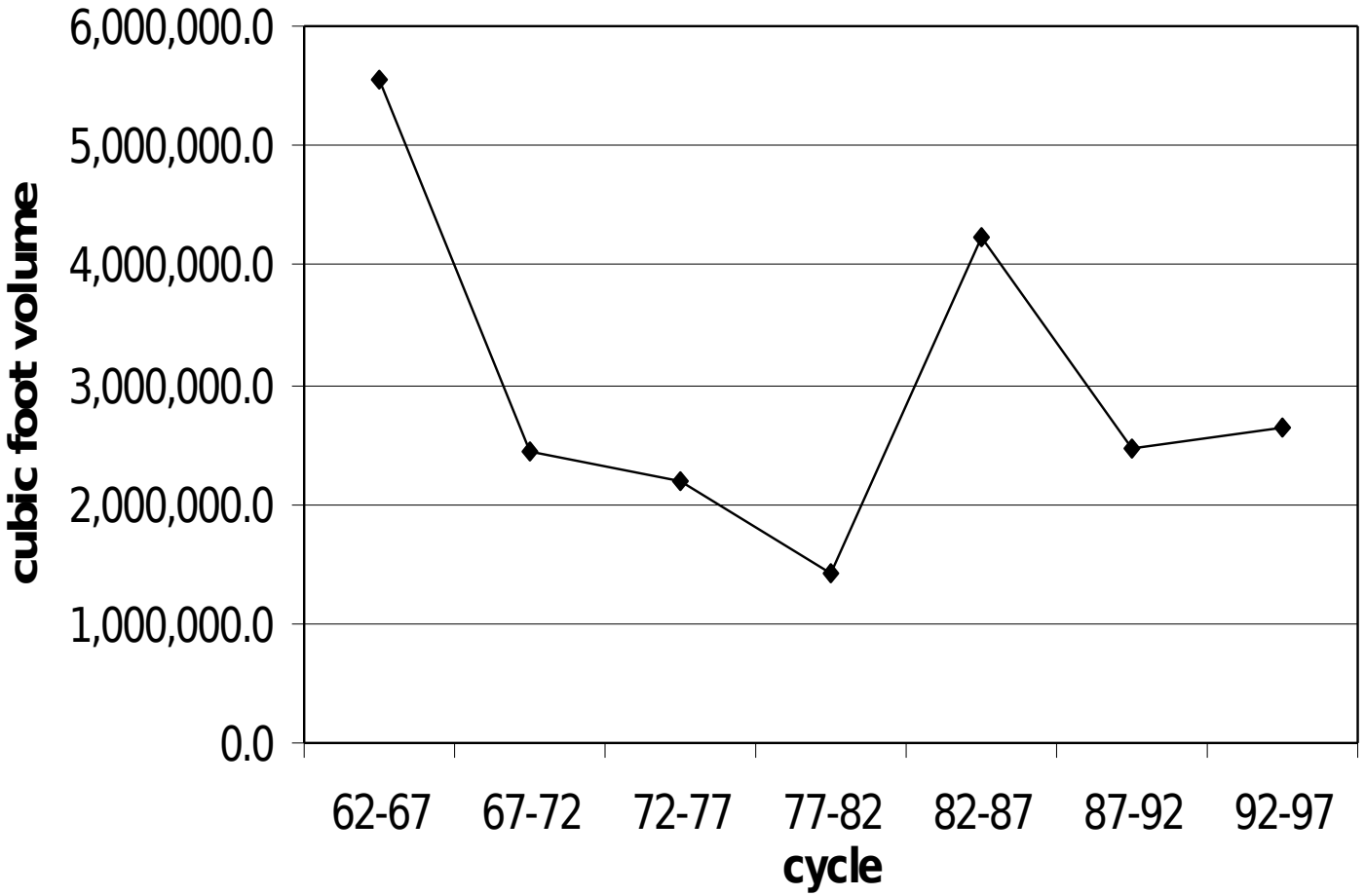
Base-wide cubic-foot volume through time



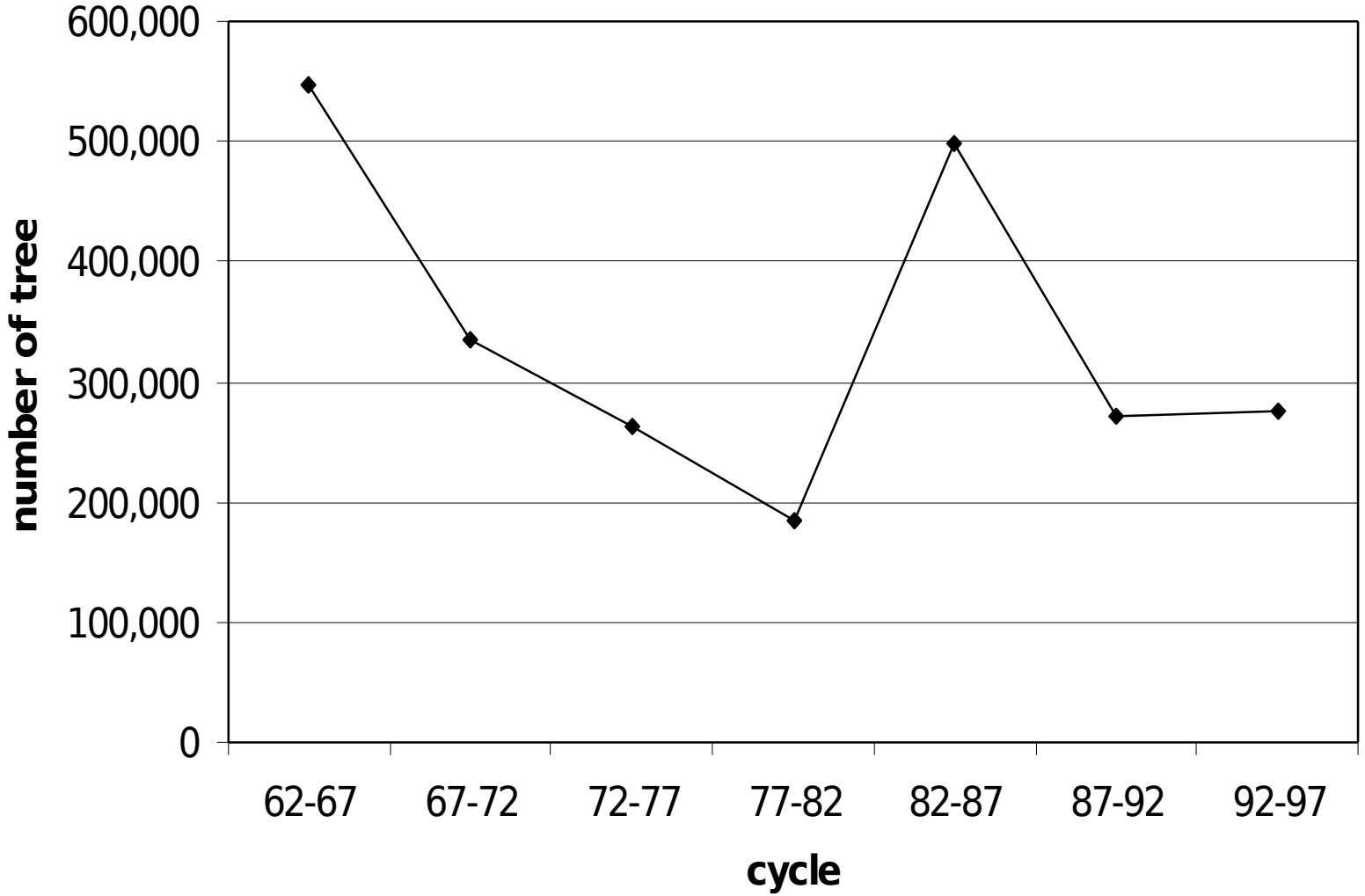
Base-wide number of trees through time



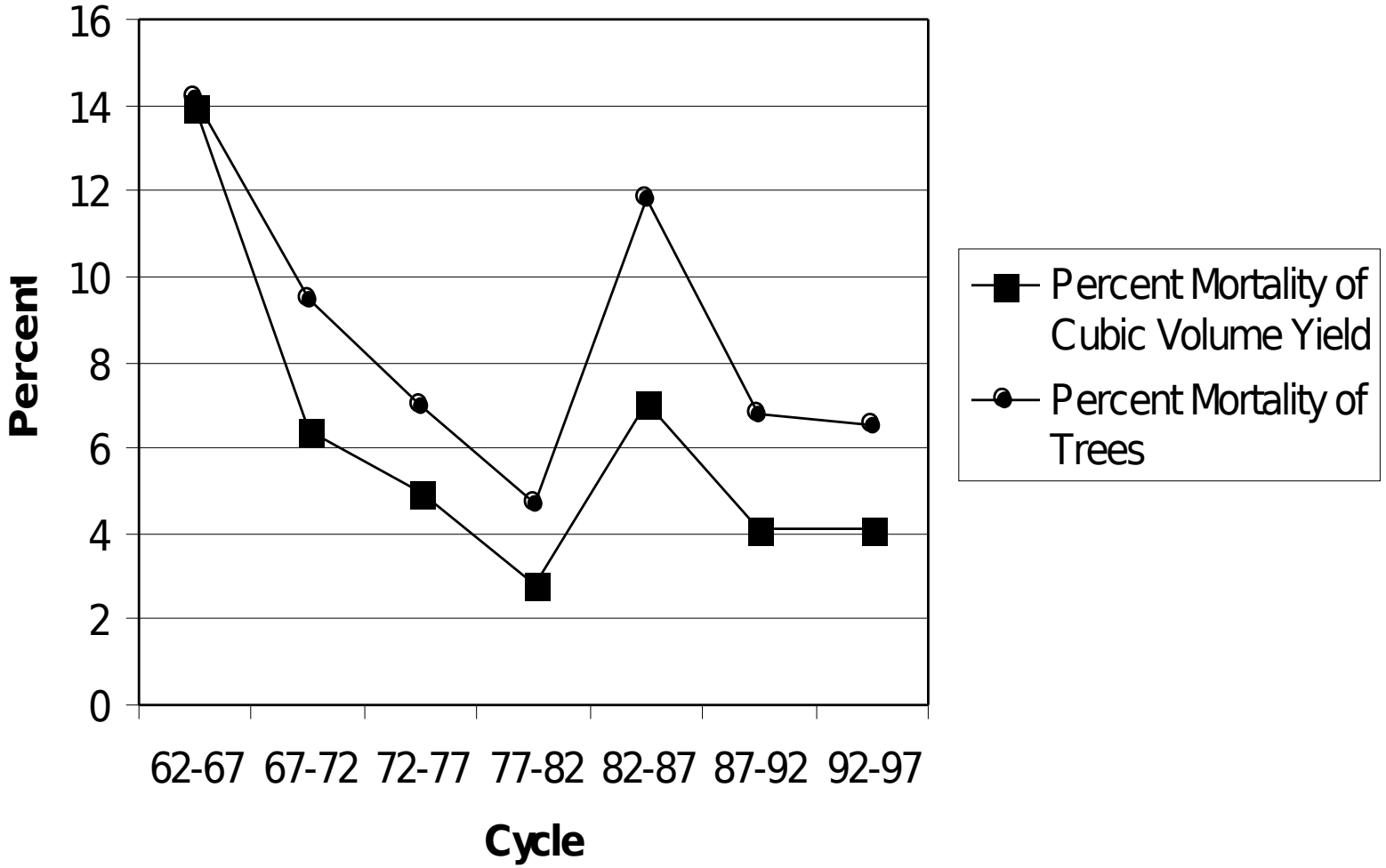
Base-wide mortality in cubic-foot volume



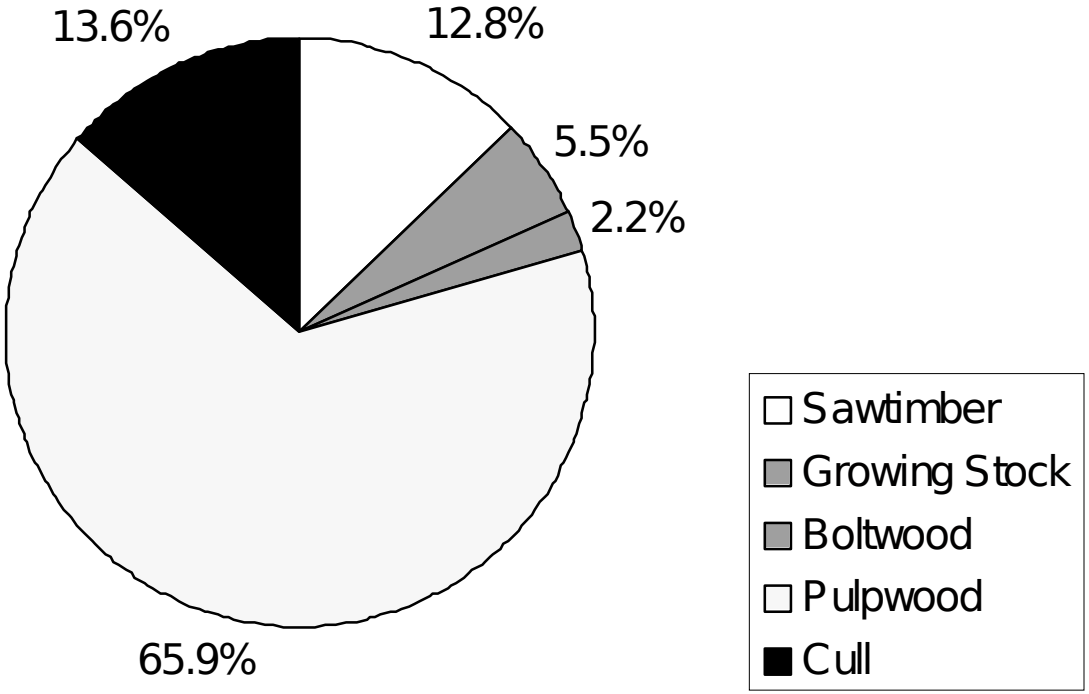
Base-wide mortality in number of trees



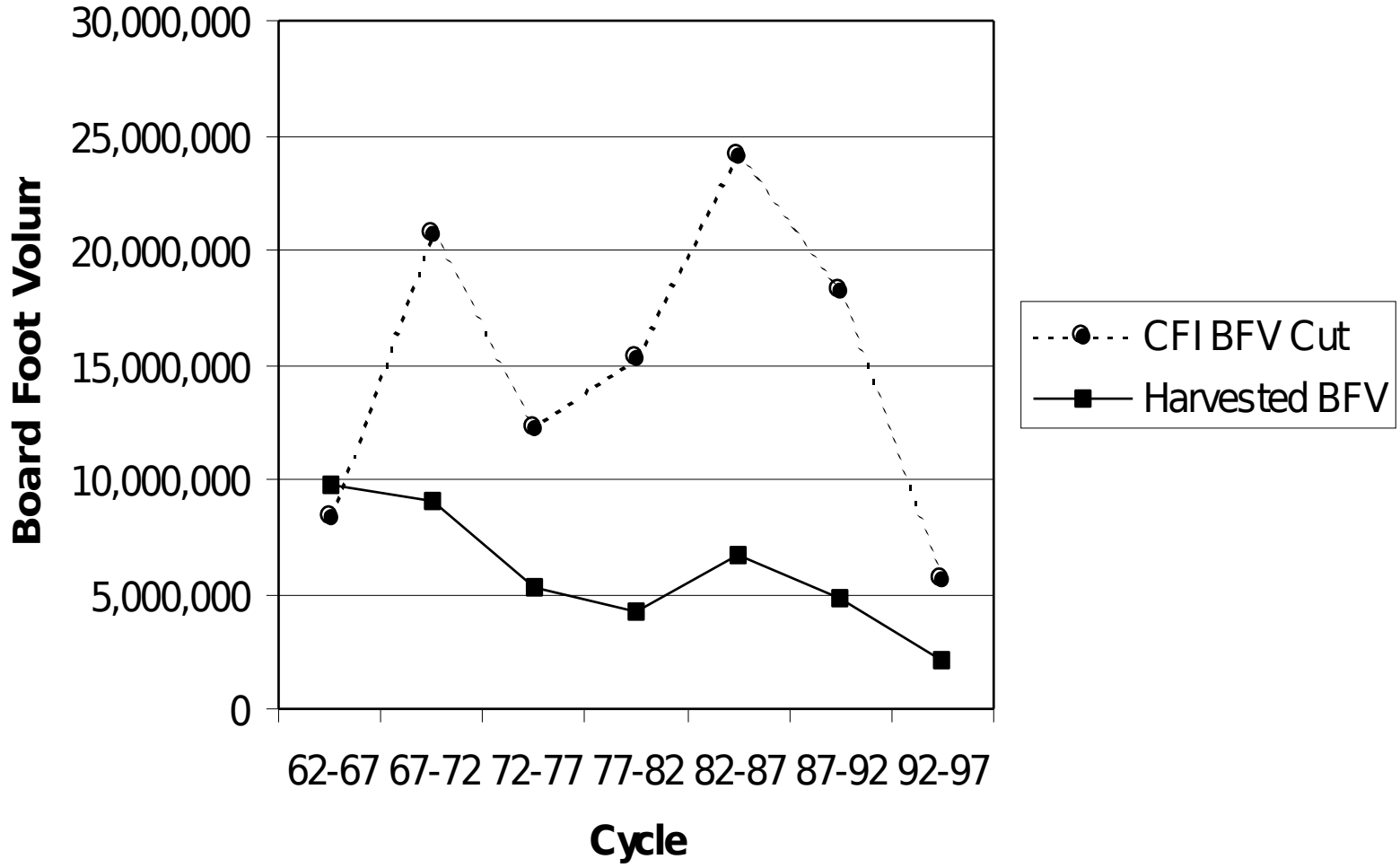
Mortality as a Percent



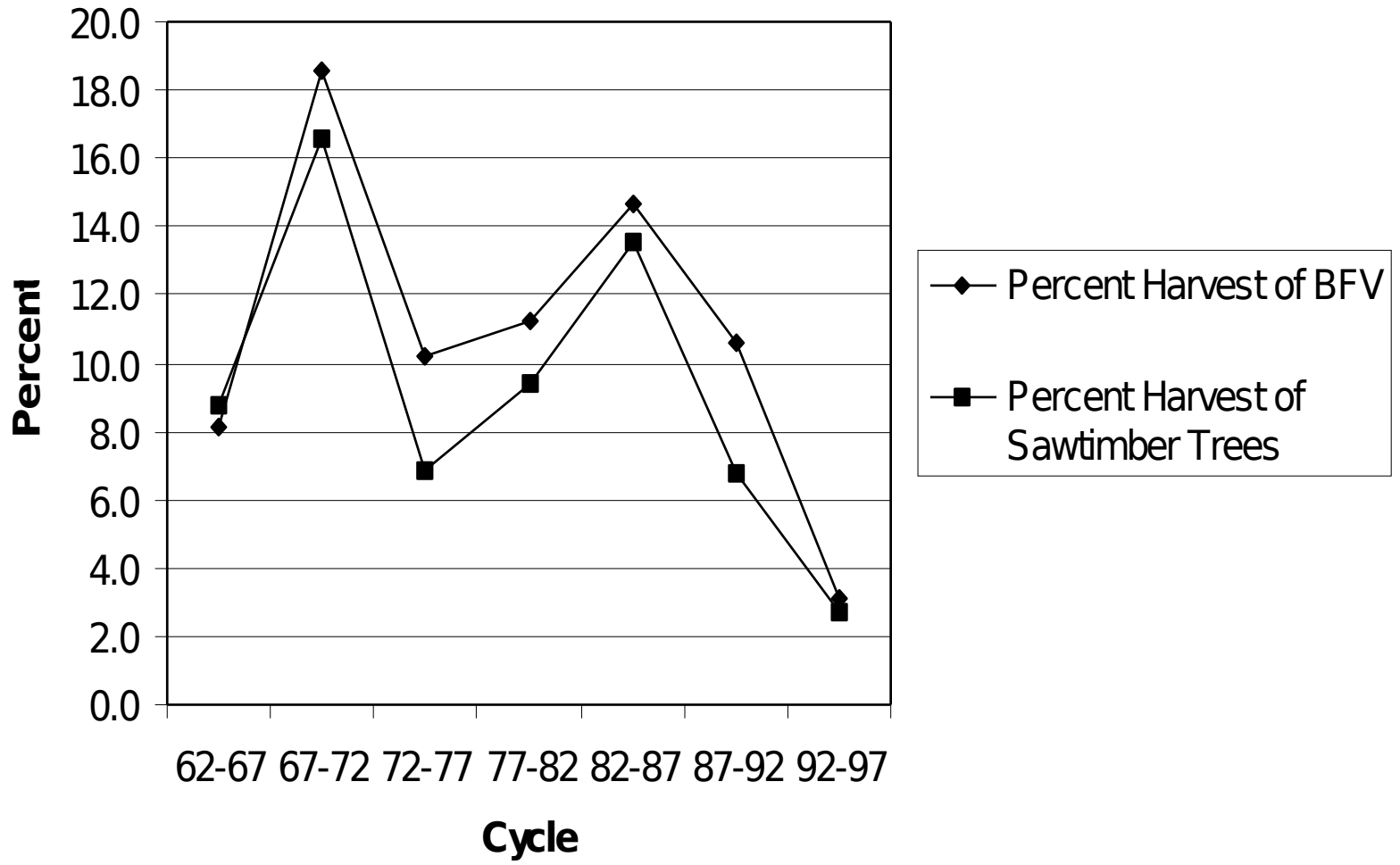
Mortality by product type



CFI cut estimates versus harvest records

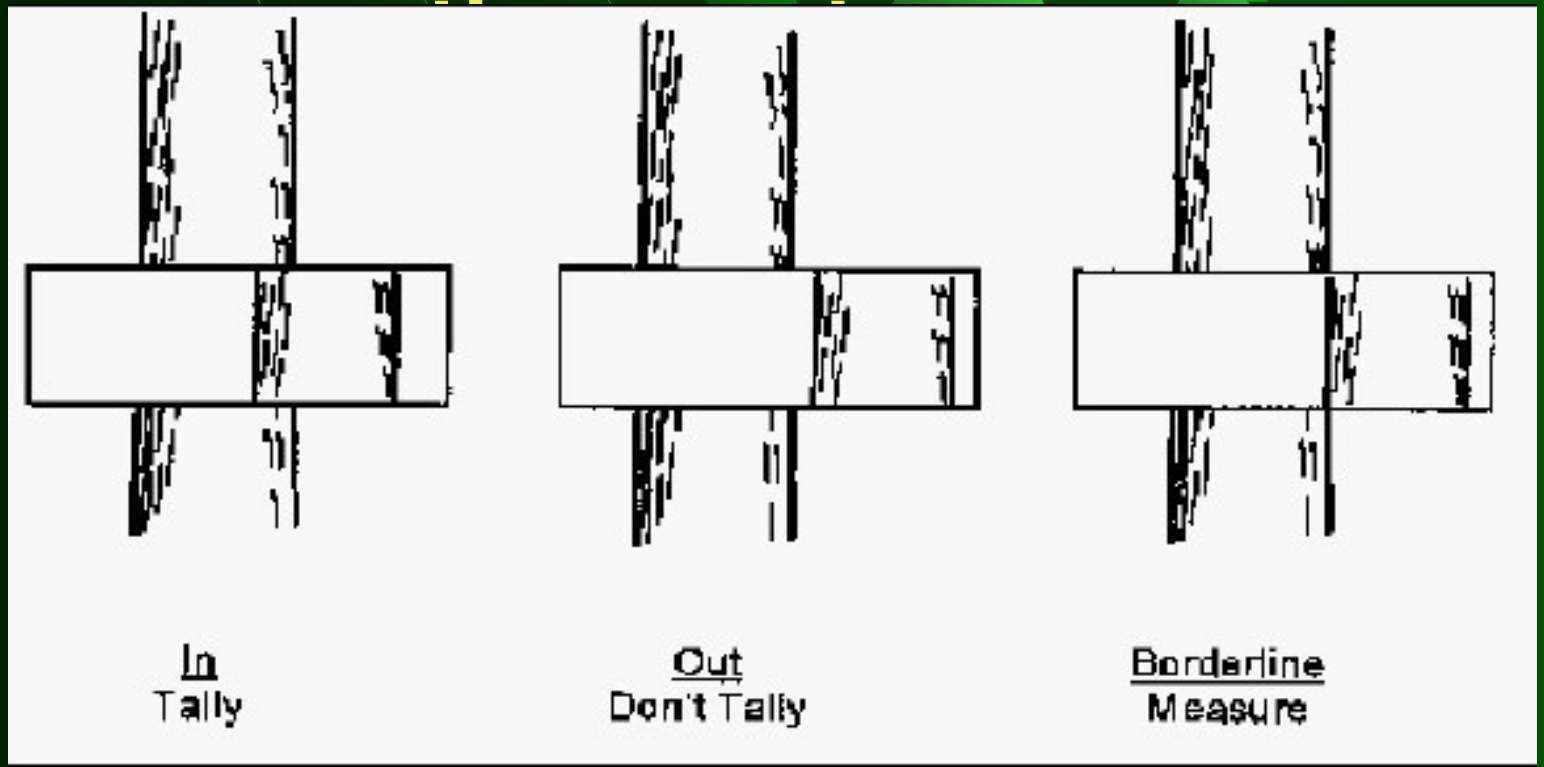


Harvest as a percent

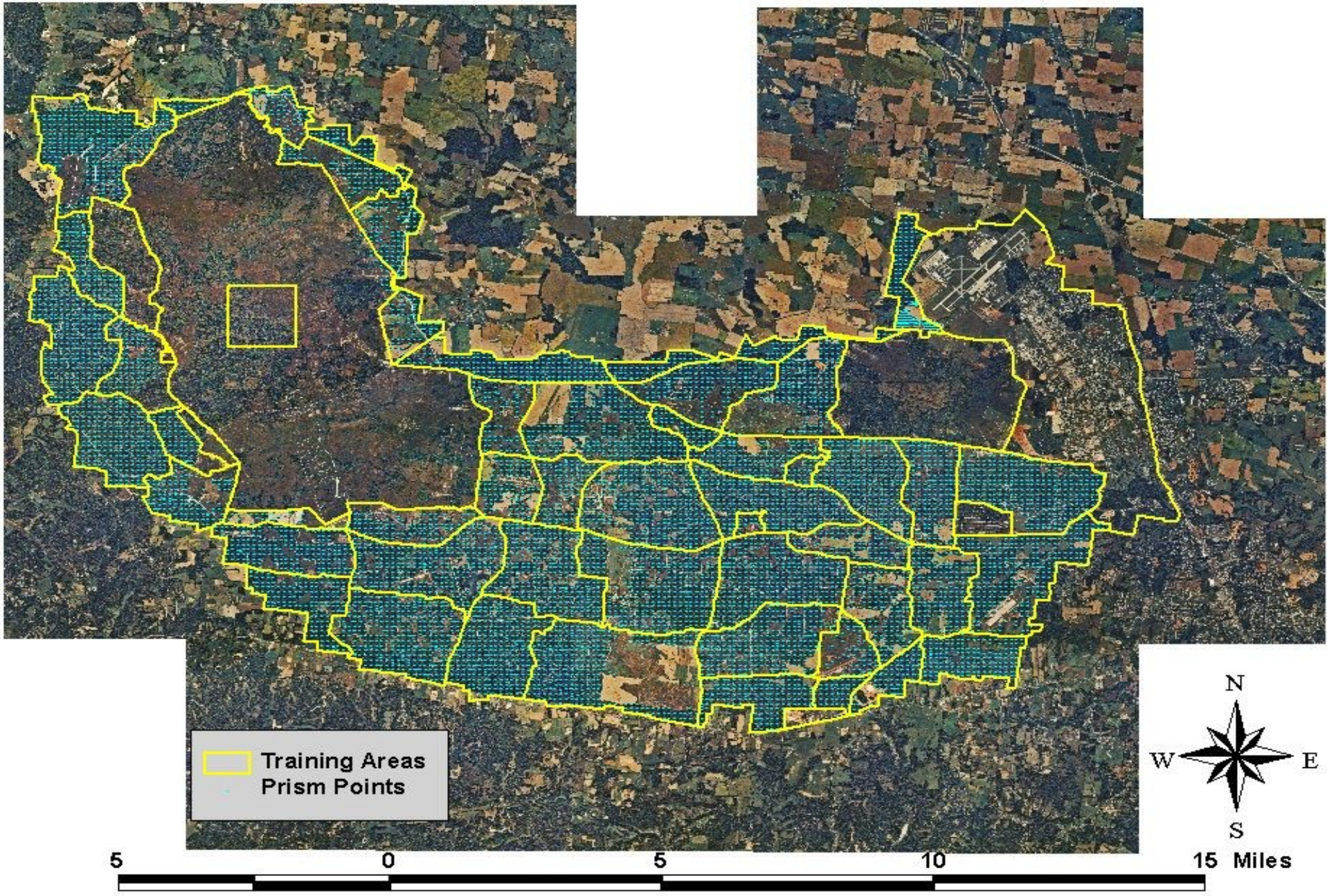


Prism Point Inventory

In 1998 a systematic sample of 9,126 temporary points was laid out on an 8x8 chain grid (1 chain=66 feet) to sample

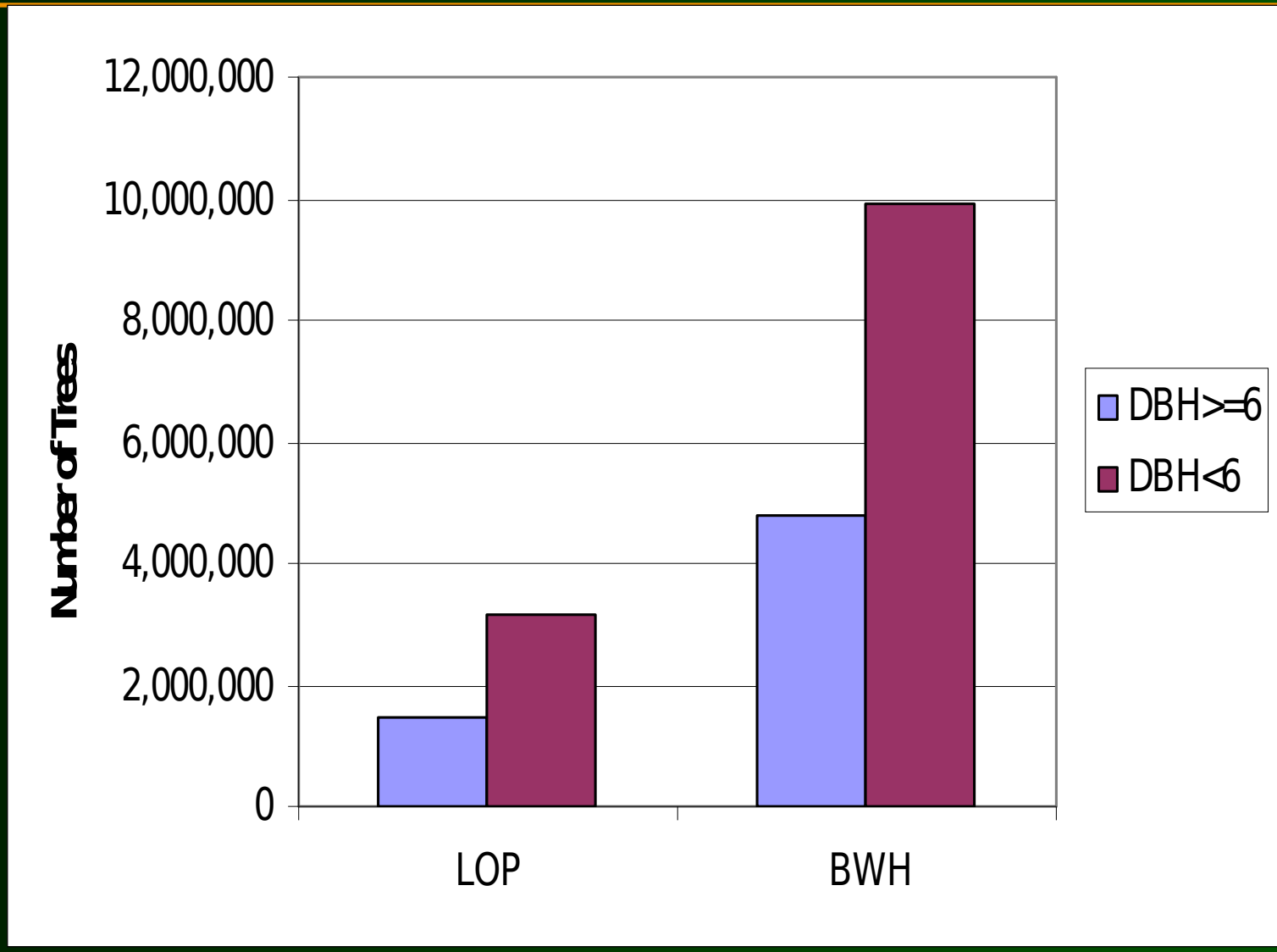


Prism Point Locations - 9,126 Points

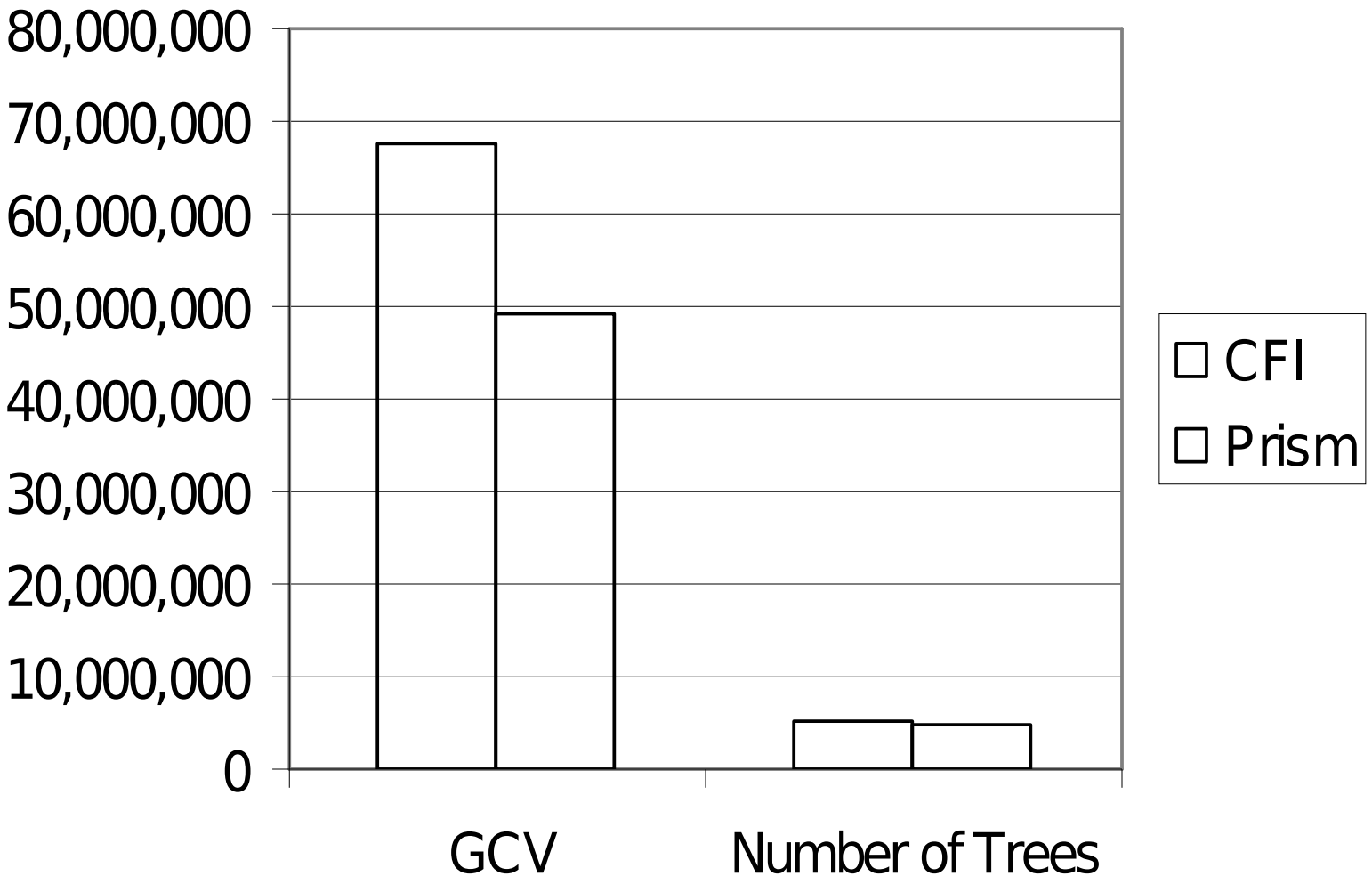


Prism volume inventory

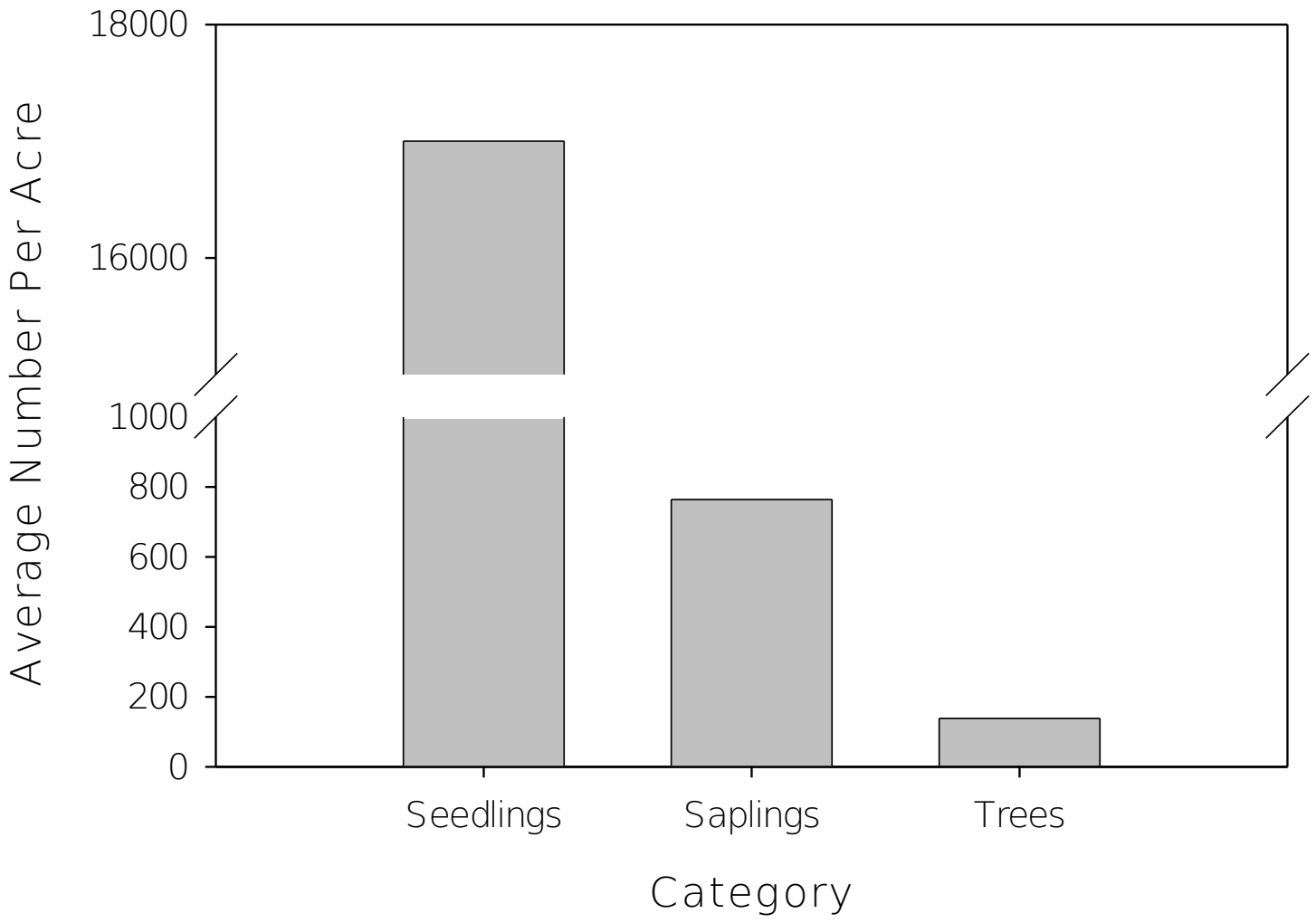
Prism trees inventory



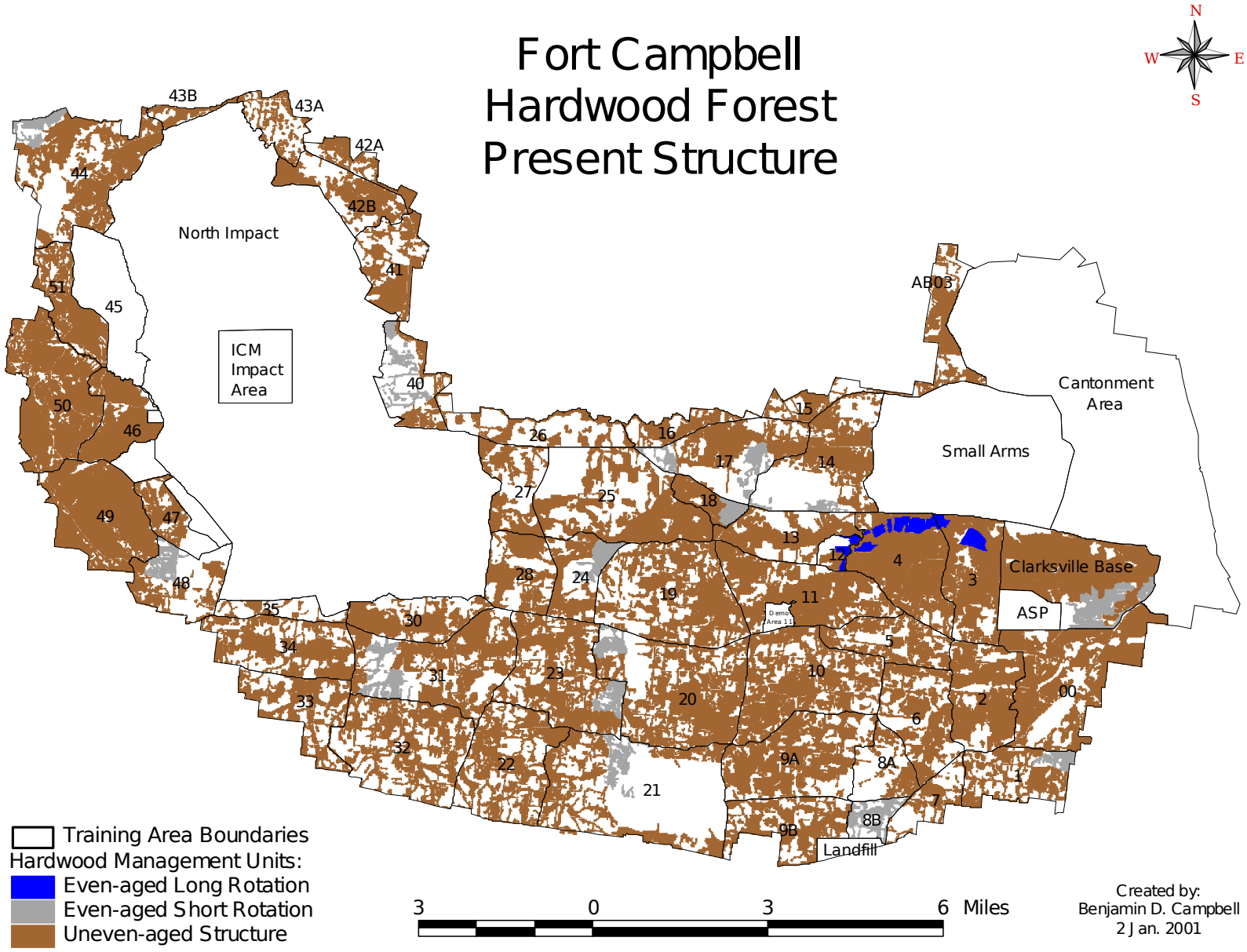
Comparison of CFI vs Prism



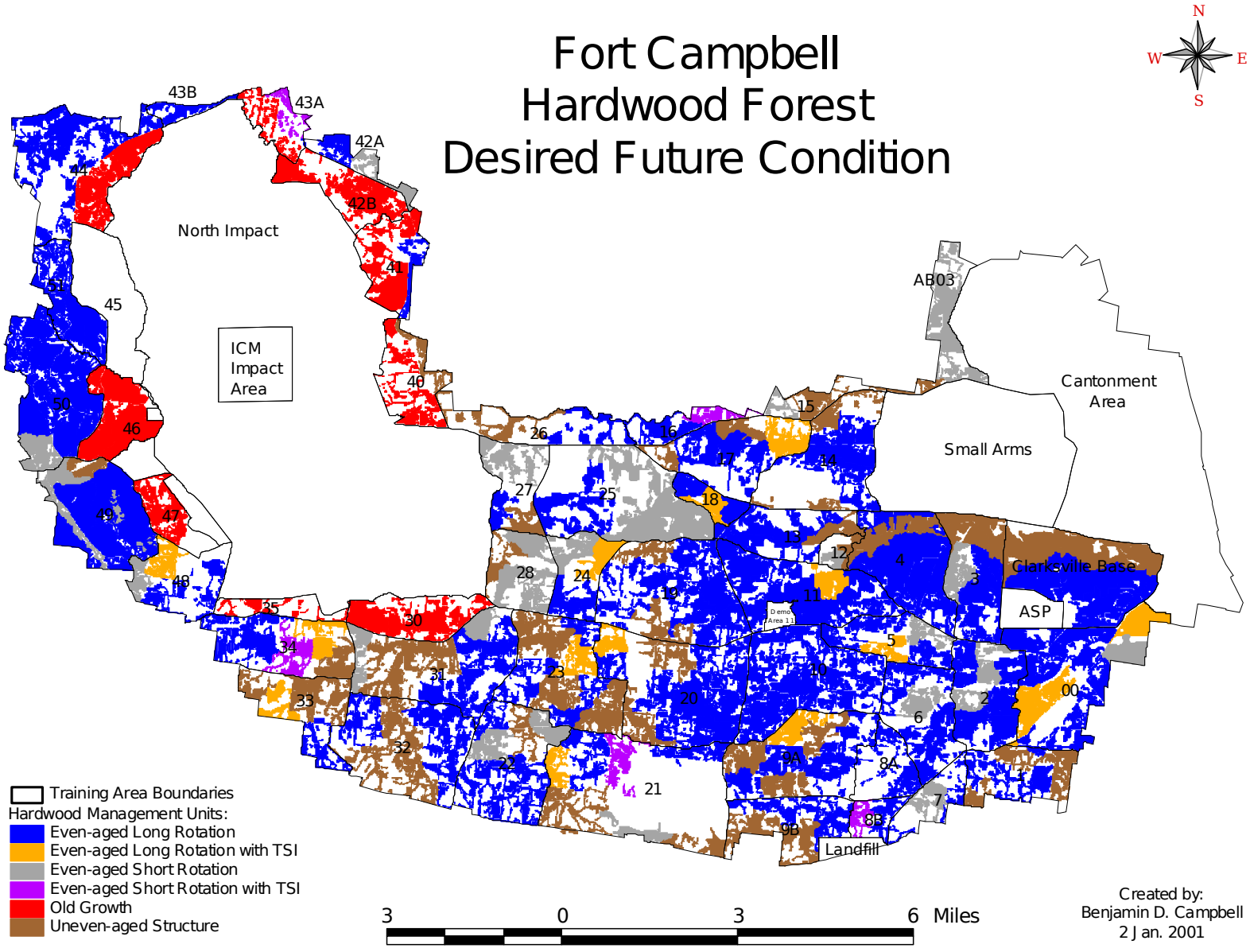
1997 CFI inventory



Fort Campbell Hardwood Forest Present Structure



Fort Campbell
Hardwood Forest
Desired Future Condition



Created by:
Benjamin D. Campbell
2 Jan. 2001